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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,928	03/05/2002	Akira Hiroshige	Q68813	5282
7590	02/16/2005			
SUGHRUE MION, PLLC 2100 Pennsylvania Avenue, NW Washington, DC 20037-3213			EXAMINER KASSA, YOSEF	
			ART UNIT 2625	PAPER NUMBER

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,928

Applicant(s)

HIROSHIGE ET AL.

Examiner

YOSEF KASSA

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-13 is/are rejected.
- 7) ☒ Claim(s) 2 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/05/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2-6 and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al (U.S. Patent 5,351,305), and further in view of Tolumitsu et al (U.S. Patent 5,729,290).

With regard to claim 1, Wood et al discloses an edge information calculation, i.e., comparing, step of extracting (selecting) an edge of the image from the digital data (see col. 4, lines 43-54), and calculating edge information including a grade (characteristics) and a direction of a slope of the edge (see col. 3, lines 33-39);

a filter information selection step of selecting filter information that is set in advance based on the edge information obtained at the edge information calculation step (see col. 5, lines 1-10); and

a processing step of smoothing the digital data based on the filter information selected at the filter information selection step (see col. 5, lines 13-21).

Wood does not explicitly call for processing digital image data. However, at the same field of endeavor, Tokumitsu discloses A/D converters (see Fig. 1, item 5 and 11). At the time of invention was made, it would have been obvious to an ordinary skill in the art to incorporate the teaching of Tolumitsu digital image process system into Wood's

system. The motivation of doing so is to provide a system to perform edge enhancement of digital image information.

With regard to claim 2, Wood et al discloses at the filter information selection step, filter information is selected for which the direction of the slope corresponds to the inclination of the smoothing range (see col. 5, lines 17-26).

With regard to claim 4, Wood et al discloses a smoothing strength calculation step of calculating luminance using the digital data, and calculating a smoothing strength using the luminance (see col. 15, lines 27-38),

wherein, at the filter information selection step, filter information is selected that corresponds to the edge information obtained at the edge information calculation step and the smoothing strength obtained at the smoothing strength calculation step (see col. 5, lines 49-65).

Claim 5 is similarly analyzed as claim 1. As to the additional limitation of "a filter information generation step of generating filter information based on the edge information" (see col. 5, lines 49-60, note that the image edge information (filter data) transferred to/from memory 58 and memories 61₁, 62₂,and memories 64₁, 64₂.....).

Claim 6 is similarly analyzed as claim 1. As to the additional limitation of "a recording medium storing a computer program for causing an image processing apparatus, which includes an input unit for entering image data," (see Fig. 1A, note that the image memory 15 comprises program to process (store) image information).

With regard to claim 8, Wood et al discloses wherein filter information read at the filter information reading step is so set that a inclination of the smoothing range

corresponds to the direction of the slope (see col. 5, lines 59-65).

Claims 9 and 12 are similarly analyzed as claims 4 and 6.

Claims 10 and 13 are similarly analyzed as claims 1 and 5.

Claim 11 is similarly analyzed as claims 1 and 6.

Allowable Subject Matter

2. Claims 2 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art Cited

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. (6559974) to Morisita discloses image processing method and apparatus...

US Patent No. (5631974) to Lau-kee et al disclose image processing

US Patent No. (5442462) to Guissin discloses apparatus and method for smoothing images.

US Patent No. (6069984) to Sadker et al disclose method and apparatus for correcting...

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSEF KASSA whose telephone number is (703) 306-5918. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM.

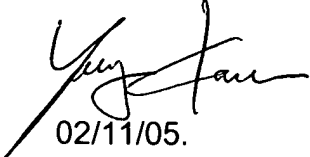
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BHAVESH MEHTA can be reached on (703) 308-5246. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communication and (703) 872-9306 for after Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PATENT EXAMINER

Yosef Kassa



02/11/05.